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# HYDROPHOBIA.

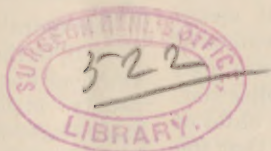


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## HYDROPHOBIA.

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Hydrophobia is a disease which has attracted much attention, and is at present one about which opposite opinions are held. Some persons deny that it ever exists in the human system, while others, as M. Pasteur and his followers, believe that human beings are as readily and fatally affected when bitten by a rabid dog, as another dog would be if bitten. Not only so, but that, by inserting a portion of the brain or spinal marrow, taken from a rabid dog, into the body of a human being—as is done in inoculating with small-pox virus—persons may be protected from rabies. Such protection is offered to all at the “Pasteur Institute” in Paris; and now, persons if bitten by a dog supposed to be mad, resort to this means of safety. In New York, too, such an institute has been gotten up, and persons who chance to be bitten, even by a healthy dog, flock to the “Gibier Institute” for protection; for the opinion has been advanced, by those “cultivating” the virus and the fears of the public, that rabies may accrue from the bite of a dog not rabid, and that “even a rabid dog may communicate it to others and afterwards return to his normal state of health.” And yet more, Dr. Gibier says: “I have experimentally demonstrated that birds, and notably hens, which contract rabies, may communicate it to mammifera, to which it will prove fatal, though the hens may spontaneously recover.” Strange talk this by a man who writes: “I know of no authentic case of rabies that has been cured in man.” The hen, though, has rabies, communicates it to a man, or cow, or horse, to

which it proves fatal, but the hen, without the aid of the Gibier Institute, recovers.

It is not my intention in this paper to call in question the practice instituted by M. Pasteur, but to refer to the great increase of reputed hydrophobia cases since he commenced to inoculate persons in order to protect them. No one who has read of his practice and its results but must have been forcibly impressed by two facts: first, that reputed cases of rabies have astonishingly increased since he commenced his preventive and curative operations; and, second, that deaths from the disease, or its treatment in the hands of inoculators, are greatly in excess of the mortality prior to that time.

In the MEDICAL AND SURGICAL REPORTER, July 5, 1890, page 24, it is stated, “Of persons treated in the Pasteur Institute from May 1, 1888, to May 1, 1889, there were 13 deaths, or one death for every 128 treated.”

It may be interesting to turn from the doings of M. Pasteur, and to inquire what is known of hydrophobia in our own country. There exists in the mind of all classes of people, everywhere in this country, great dread of mad dogs and of hydrophobia; a dread engendered and spread abroad by the newspaper reports of the horrible sufferings of the victims of hydrophobia; their convulsions at the sight of water or on attempts to swallow it; the distortions of face; the whining, howling and slaving like dogs; and their being smothered under feather-beds, or bled to death to prevent them from injuring others.

On October 18, the newspapers reported



that a man in Atlanta, Georgia, was so violent while under the disease, "that six men could not hold him down under a bed, but when eight men got on it, they were enabled to overcome him"—which meant smothering him, I suppose. Reports of bleeding such patients to death have been common from my earliest recollection. These things are known to every child of ten years; and is it strange, then, that the disease is regarded with peculiar horror?

When quite young—seventy years ago—a lad whom I knew "died mad," the people said. He had been bitten by a neighbor's dog which was immediately killed. It affected me greatly; so after my graduation in 1828, I applied to that museum of knowledge, Prof. John Redman Coxe, for information in regard to this disease, and from that time to the present I have been mindful of it. Prof. Coxe told me of the many kinds of creatures liable to the disease—hens were included—but the wise old man did not then know that a hen could have the disease, could infect other animals—even men, and then rid herself of it, and become food for rich citizens. That was reserved for our "Institute" to discover.

Mad dogs are not often met with in our State, or if they are, and persons are frequently bitten by them, then either the virus is nearly harmless in the human being, or we have better means of prevention than M. Pasteur's inoculation measures.

Why do I hold this opinion? Because during seventy years, with my eyes and ears wide open to see and hear all that is known on the subject, there is no record of a single well authenticated case of hydrophobia having occurred within our country, and only two supposed cases—cases of false hydrophobia perhaps—though many hundreds have been bitten by dogs said to be mad, during that period of time. If so many were bitten, how did they escape, when there was no Pasteur or Gibier to inoculate them? During nearly the whole of the present century, though the disease has not received any attention from medical teachers in our medical colleges, yet intelligent physicians throughout the State, acquainted with the teachings and experience of the justly celebrated English veterinary surgeon Youatt, practiced his teaching, and when persons who had been bitten presented themselves, excised or canterized the wounded part, assured the patient that he was in

no danger, and no bad results followed. But physicians were seldom asked to prescribe for such patients. There were specialists then as now.

For more than a century there has been known, in the eastern part of Pennsylvania, two mad-dog doctors, to whom hundreds of people, bitten by dogs supposed to be rabid, have resorted for protection from hydrophobia.

"Dr. Stoy's remedy for Hydrophobia" was known the latter part of the last century, it is said, throughout Pennsylvania and in parts of the adjoining States, and was regarded as a certain preventive of hydrophobia. The following history was given to me a few years ago, by a friend. "Dr. Wm. Stoy was a native of Germany, who came to this country before the year 1800, and settled in Dauphin County, Pa. He devoted much of his time to the study of chemistry. Soon after his arrival he petitioned Congress for the grant of a large sum of money, on condition that he should promulgate his great discovery, for the cure of hydrophobia, for the public benefit. Failing in this, he then offered his recipe to the heads of families at a fixed price, binding them, however, under oath not to divulge the secret, or to use it for the benefit of others. After his death in 1809, his widow, Elizabeth Stoy, took out a patent for this medicine. One who bought a 'right' kept his oath so religiously that he allowed a neighbor who had been bitten by a rabid dog to die rather than violate his oath. Among the papers of one who had purchased the recipe, it was found after his death, written in German. It was translated into English, and is as follows.

"Take one handful of dried *Anagallis Arvensis*;<sup>1</sup> pour on it two quarts of good beer in an earthen pot; boil it over a slow fire to half the volume; strain through a cloth; add of vermilion treacle two drachms. It must be well stirred up and mixed in liquor. Dose for a man one pint to be taken in the morning, fasting. If any signs of hydrophobia appear the medicine should be taken two or three mornings in succession. The dose for a female, three to three and one-half gills, for children according to age." Many years ago the following was published.

<sup>1</sup> This is the common pimpinell—ED. REPORTER.



"MAD DOGS—THE STOY REMEDY."

"In 1819, one Valentine Kectering, of Dauphin County, communicated to the Senate of Pennsylvania a sure remedy for the bite of any mad animal. His ancestors had used it in Germany two hundred and fifty-six years ago, and he had always found it to answer the purpose during a residence in the United States, of fifty years. He only published it from motives of humanity. This remedy consists in the weed called chick-weed—a summer plant, called by Germans and Swiss, Gauchnell Rother Mayor, or Rother Huehnerdarm, in England called Red Pimpernel; botanical name, *Angelica Phœnicia*. It must be gathered when in full bloom, in June, dried in the shade and pulverized. Dose for a grown person is a teaspoonful (in weight and a drachm and a scruple) at once, in beer or water. For children the dose is the same, but must be applied at three different times. It can also be put on bread and butter, or given in honey or molasses. The Rev. Mr. Muhlenberg said that in Germany thirty grains of this powder are given four times the first day; then once a day for a week; while at the same time the part is washed out with a decoction of the weed, and the powder strewed on it. Mr. Kectering said, that he, in all instances, gave but one dose with the most happy results. This is said to be the same remedy through which the late Dr. William Stoy effected so many cures."

I may remark here that he speaks of the plant as *Angelica Phœnicia*; while in Stoy's recipe it is spoken of as the *Anagallis Arvensis*, which is the botanical name of the red pimpernels. They evidently used the same plant.

During the long time in which Stoy and others used this remedy another man, or rather family, in Montgomery County, were celebrated as "mad-dog doctors." "Dr. Fry," the great mad-dog doctor, was a familiar name to me full seventy-years ago; and as hundreds of people in this and adjoining counties have resorted to them for protection and cure, and always, it is reported, with success, allow me to speak of them. Even within my circle of practice many people have gone to him, and not a single one was a victim to the dreaded disease. As many of the persons were members of families with whom I practiced, I had frequent oppor-

tunities to see the printed directions, which are as follows:

"First wash the bite of the dog with warm vinegar; then apply the blister to reach a little over the sore; tie it up; let the blister lay on for ten hours; when it has drawn a full blister, then open the blister and keep it off. Then take cabbage leaves and make them warm on the stove and soft in the hands; then apply them and let them lay on for two hours; then apply fresh leaves, and so continuing till four days have expired; then apply the same blister again; let it lay on three or four hours; then take it off and dress with cabbage leaves, as before mentioned until fourteen days have expired; then spread a rag with sheep's tallow twice a day applied till it is healed."

"Medicine for hydrophobia. Take all this powder and put it in a new earthen pot; pour one pint of porter on it, and set the said pot on a low or moderate coal fire; let it boil down to one-half; then strain it through a clean linen cloth, hot out of the pot, into a pewter dish; then take the medicine out of the bottle and mix it well together, and when it is well united, then give to the patient one-fourth of the dose in the morning, fasting, lukewarm, and the remainder, the next four mornings in succession, as before mentioned, and the patient after taking each dose, must fast three hours, and fourteen days thereafter shall drink no water, not to meddle with water and not to see any water, and not to eat any pork or pies baked with lard, except butter, not to eat any fish or water-fowl that swims in water for fourteen days thereafter, and not to go in the rain or where it is foggy.—W. S. Fry; near Lansdale."

"Dr. George S. Fry, Catharine Fry."

The above mode of treatment has been strictly followed by a great many people in our county and the adjoining ones.

Since Dr. Gibier opened his institute in New York, and his reports have so excited the people's fears that cases of hydrophobia have greatly increased, I felt a desire to talk with our mad-dog doctor and learn from his own lips what his success has been. So, a few weeks since, I rode to Lansdale and visited him in his little store. When introduced to him by the friend who was with me, I said to him that I had come to see him in relation to his treatment of hydrophobia; the number treated by all the



members of the Fry family, and their success in treatment. He quickly replied: "We never lost a single patient." "How many have you treated?" "More than three hundred." "Have you ever treated one when the disease was upon him?" "Yes! More than one, and they recovered." By this time he seemed to get a little suspicious that I had some secret motive for asking questions, and he became somewhat reserved. I then said to him: "I do not want to know anything about your remedies; and, to be frank with you, I have no belief in their possessing any medicinal value in preventing hydrophobia, but possibly great value, when conjoined with the assurance which you give the patient in removing the perturbed condition of the nervous system, and inspiring them with a firm assured hope—confidence I may say—of protection." This seemed to remove all reserve on his part. "Doctor, are you not in error in saying that you have never lost a patient, did you not lose young Yerkes?" "Ah! he died; but it was his own fault; the three boys were all bitten. The other two followed the directions for the whole fourteen days; but that young fellow, after being in the room two days, jumped out of the window and went to swim with neighbor's boys." The boy's uncle had told me that the boy had fully followed all directions, but I pressed Dr. Fry no further, but said to him: "I have been told that you use the same remedy that was used by Dr. Stoy—the red pimpernel." "Yes! we use *that*, but we have five other ingredients." He narrated a severe case of the disease to which his father had been called, and which he cured.

The readers of the REPORTER will doubtless ask, why I have thought it necessary to speak of the unscientific practice of these non-professional men, and especially as I do not believe their remedies have any medicinal effect of value in the treatment of the disease?

The object in treatment should be to prevent the occurrence of disease, and, if present, to cure it. It appears that many persons have lost their lives after treatment by Pasteur, yet he boasts of great success. From his own statement, one out of every one hundred and twenty-eight died, but the *Journal de Medicine*, March 30, contains a list of ninety cases who have died after receiving the so-called

"preventive treatment." In addition to that, it is said to be a fact, that since it has been practiced, there has been an actual increase in the number of deaths from hydrophobia in France. And a similar increase is said to have been noted in New York as a result of the excitement caused by the existence of the Institute there.

Now, everywhere in this State the confidence of the masses in the power of the mad-dog doctors seems to be so great, that even when bitten by a dog supposed to be rabid, their nervous systems are not so disturbed as to lead to fatal results. Dr. Fry says that out of more than three hundred who were bitten and treated by him, not one was lost by hydrophobia, after their treatment. Pasteur has lost many—Fry not one; or, if any, only one. It is seventy years since the little boy, Rossiter, died from what was called hydrophobia; and I do not know that he received Fry's treatment. I know of no other one in all these years, anywhere in the county—though scores have been bitten—who died from rabies, whether treated by Fry, or by physicians, or not treated at all.

I wish to be fair towards the Pasteur Institute, and therefore regret that I have not access to their reports up to this time. In the MEDICAL AND SURGICAL REPORTER of October 25, 1890, which has just come to me, I find "Hydrophobia Notes," from which I gather that a patient died in the Bellevue Hospital with his arms tied to the side of the bed and four men holding him, while the physician dosed him with morphia and gave him chloral. Gibier says it was a genuine case of hydrophobia. I have no knowledge of the case save this. Whether the man was bitten at all, and what the symptoms were which made it necessary to tie him to the bed and have four men to hold him, I do not know; but I do know that the physicians of that hospital should not have allowed such a report to be sent abroad, through the newspapers, and even Dr. Gibier's declaration that it was a true case of hydrophobia may be honestly questioned by those who are well read in the history of hydrophobia. In the August number of the *North American Review*, there is a paper on "False Hydrophobia," by Dr. Wm. A. Hammond, Surgeon-General, U. S. Army (retired), in which, on pages 170 and 171, he writes, "Several years ago I



saw, in consultation, a policeman who had two or three days before been bitten by a dog, and whose comrades had frightened him by their inquiries and suggestions. He was then in the Park Hospital, in the city of New York, held down by four strong men, and snapping like a dog at every one who came near him. At the sight of water, he became intensely excited, and went through a series of fearful contortions of his face. He had visions of mad dogs trying to bite him, and was hiding his face under the bed-clothes. Every attempt to make him drink a glass of water produced a series of spasms and howls of anguish that alarmed the neighborhood. The short period of the incubation, the extreme violence of the symptoms, and the fact that he had drunk a glass or two of brandy without difficulty, gave me at once a clear idea of the case. I filled a tumbler with ice-cold water and holding it to his lips told him in a commanding tone to drink it immediately. He took the tumbler in his hand and drank it as readily as he had ever done in his life. The spell was broken, and a few minutes afterwards he got out of bed declaring that he was perfectly well, and he went to duty the next morning. It is quite within the limits of probability that if he had been allowed to go on for two or three days in the way he had begun, death from exhaustion would have been the consequence.

"That death may result from false hydrophobia is as well established as any other fact in medical science. There is a case on record of a man who died in fifteen hours with all the symptoms of hydrophobia which had ensued on a violent paroxysm of anger."

Dr. Hammond gives other most interesting cases of false hydrophobia, which I must leave for the present, but which ought to be known to all physicians, so that when standing by the bedside of such a patient they should not require the man to be bound to the bed and have strong men to sit on him, or smother him under the bed; but should be able to distinguish the false hydrophobia from the true—if there be a true—and use means to cure him. And let me add here, that whenever the patient exhibits very violent symptoms, it is almost positive proof that it is the false kind. I have received from my friend and neighbor, Dr. Oscar Lee-

dom, an account of a case to which he was called a few years since, which may be interesting to practitioners.

"I was called one evening in the fall of 1892 to see a young man supposed to be suffering from hydrophobia. Upon arriving at the house I found the family in a great state of excitement. His mother, an intelligent and honest woman, told me that he had been bitten by a dog a short time before, and that she feared he was getting hydrophobia. I allayed her fears as much as possible, and asked to see the patient. I found a young man of twenty-five years in a dark room, while two strong neighbors were holding the door. At my request they opened it, when I found the patient going round and round the room on all fours, like a dog, and imitating a dog's gait and antics as nearly as possible. He continued this for some time, then suddenly darted out of the room to an adjoining one, still going on his hands and feet. I then had him caught and held by the two men, while I assured him that he had no hydrophobia whatever, and that he must quit his antics, or I would have him held under the pump and have the cold water pumped on him. This quieted him somewhat, but on releasing him he darted off again, into the back room, and began to go round on his hands and feet, dog-like, again. I then had the two men to seize him and drag him into the kitchen where stood the pump, where I determined to pump water upon him. This brought him to his senses, and he begged us to let him go. I told him I would only let him off, on his promise to do as I bid him. To this he agreed. I then gave him one-quarter grain of sulphate of morphia, and told him to go to bed. He swallowed the medicine, and then hurried up stairs to bed. There was no more trouble with him that night, and next morning he was well and ready to go to work. So ended my case."

How applicable here are the remarks made by Dr. Hammond in closing his case: "If this man had been allowed to go on for two or three days as he had begun, that death from exhaustion would have been the consequence." Suppose that Dr. Leedom, instead of assuming a tone of authority and determination, had, as seems to be the usual custom with physicians, been afraid to go near to the patient, had gotten some one to get a cup of water—after he had him



secured—and had asked him to drink it; would he not have shrunk from it, have been thrown into spasms as is so usual in such cases, and it have resulted in his death?

As we have looked somewhat into the doings of the Paris Institute, let us turn our attention to Dr. Gibier's Institute in New York. In the *MEDICAL AND SURGICAL REPORTER* it is stated that thirty-nine persons were bitten by animals supposed to be rabid; that many of the animals were not known to be rabid; indeed there was not a single case known to be so. That those who were bitten were badly frightened people who had heard of Pasteur's treatment is apparent from the fact that many of them came from far away States. In the cases of the boy of twelve years, bitten two weeks before he reached the Gibier Institute, and the old man of 70, bitten twenty-eight days previous to reaching there, Dr. Gibier refused to treat them. Why? Fearing, we may believe, that the incubation period was nearly completed and that, if so, his remedy might fail and thus be discredited. So, instead of inoculating them—a most fortunate escape for them—he pronounced them doomed; yet they remained well. But suppose instead of refusing to treat them, he had inoculated them, and they had gone home and remained well; then they would have swelled the lists of cures, as hundreds of others like them have done. It is apparent that his confidence in his means of prevention is very weak. As for curing one already "mad," he makes no pretense to do that, but honestly says, he "has never known a case of rabies to be cured."

In the August number of the *North American Review* in a paper entitled: "The Pasteur Treatment," by Dr. Paul Gibier, director of the Pasteur Institute in New York, he writes: "Some die fifteen or twenty days after having been bitten, others only after a few months or even years." Dr. Hammond in the same number of that *Review*, in a paper on "False Hydrophobia," says: "Hydrophobia rarely supervenes until after a month has elapsed after the bite; and in my cases the time has varied from twenty-five days to four months." With these facts before him, and the testimony of the celebrated and experienced Veterinary Surgeon Youatt, that "the excision of the wounded

part, at any time prior to the attack of rabies, would insure the safety of the person," that Dr. Gibier should have refused to treat them, and to declare that they were doomed, is not readily explained, save by the theory that he had no confidence in his means of prevention. Now let us consider what has taken place all over our country in relation to persons bitten by dogs—I will not say mad dogs—as rabid as were those by whom Dr. Gibier's patients were bitten. In the country nearly every family keeps a dog; many families two or more, and country physicians are very liable to be bitten. It has been my fate many times—three times in one week I was attacked, and two of the bites received drew blood from me. So it was no doubt with hundreds of others in this State. But we did not kiss the mad-stone, or go to the mad-dog doctors, and fortunately we had no "Institute" where we could be inoculated, so we just went on as though nothing had occurred, or as though we had never heard of danger from the bite of a dog; and yet who ever heard of the death of a country doctor from the disease called rabies? There have been thousands of persons bitten by dogs in Pennsylvania during my seventy years of observation, in relation to cases of rabies; and yet, how very few deaths from hydrophobia, true or false, have we heard of. How shall we explain this, seeing as we do now, that hundreds, yea thousands, are flocking to the institutes, in New York and Paris, who have been bitten by mad dogs—or by healthy dogs—whose bite is, according to Dr. Gibier, capable of causing rabies in mammifera, save by saying that mad dogs are very scarce; that bites of healthy dogs cannot cause rabies; that no such case has ever occurred; and that, here, when a person was bitten by a dog and feared that he was rabid, he went at once to a physician and had the wound excised or to Dr. Stoy, who according to the report of Kectering, used a remedy which had been successful in every case during two hundred and fifty-six years, or to Dr. Fry, who, in hundreds of cases treated by him, had never lost one, or only one.

These were the means used by many, and yet not by one-tenth of those bitten; the great majority did nothing, but like the country doctors, gave themselves no trouble about it.



But let us look into Dr. Fry's "Institute." In it we see, not thirty-nine, but three hundred or more, men, women and children, who have been bitten by dogs (I will not say rabid dogs—as rabid, though, as were the dogs by which Dr. Gibier's patients were bitten), and whose fears have brought them to this unscientific man, of whose great power to save them they have often heard. They came with strong faith that as soon as they were under his treatment they would be safe. He does not terrify them—turns none away through fear that they may have nearly reached the end of the incubation period, but with strong confidence in his measures, begotten by a half century's unvarying success, inspires them with a joyous hope and from under his hands they pass away relieved from fear and protected, one and all, from the dreaded rabies.

And, now, what has been the outcome in all Pennsylvania to those who took no measures to protect themselves, others who sought relief from physicians, and those who trusted themselves to the mad-dog doctors, Stoy and Fry? I answer, as I think physicians throughout the State will, that we have scarcely had a well-authenticated case of true rabies in all this populous State. But alongside of what has happened here, how frightful are the reports which come to us of deaths under the inoculation measures in Paris. Do I believe that because Fry and Stoy lost none and Pasteur many, very many, by death, that the medicine given by the former, and the apparently absurd pre-

cautions and course of diet and conduct prescribed by him were necessary? I believe the medicine, and all else advised, were entirely useless, save only as they served to allay the fears of the patients and confirmed them in a belief of their own safety. If, then, my opinion is correct, that the medicine had no value as an antidote to the poison of rabies, it must be plain to my readers that the dogs—the hundreds said to be mad—were not so; and this is the reason why the hundreds—thousands of persons, I might say—bitten by dogs in Pennsylvania during the past century did not become victims to true hydrophobia, though a few may have fallen victims to false hydrophobia—an affection so ably described by Dr. Hammond, who is the peer of physicians of the "Institute" in this or any other country.

I believe there is a disease called rabies, to which dogs are liable, and I always heretofore *have* believed that it could, by the bite of a rabid dog, be communicated to the human system; but now it seems as though false hydrophobia may yet include all cases which may happen in human beings. Time and more careful observations than have heretofore been made will soon reach the truth in this matter. Until then I hope that physicians will earnestly investigate the subject, and that all medical colleges will have it embodied in their course on the "Practice of Medicine," and that Pennsylvania will be saved from the dangers which would follow the erection of a Pasteur Institute within her borders.







## HYDROPHOBIA.

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Our first reliable account of rabies was by Aristotle, 322 years before Christ. He thought all animals except man were liable to the disease by inoculation of one from another. Virgil, Horace, Plutarch, and others, 130 years before Christ, gave interesting accounts of the disease; and in the second century after Christ, Galen spoke of it as the worst of diseases and recommended as a preventive excision of the wound. From the time of Galen to that of Rhazes, A. D. 922, but little was written concerning it. In the present century the writers have been numerous, as nearly all who publish works on the Practice of Medicine treat of it, but merely speak of it as it has been regarded by writers of an earlier period.

In the writings of two hundred years ago we find the disease was as accurately described as it is in those of our own times. All of them alike speak of the cause of rabies, the symptoms, the invariably fatal ending, and the means of prevention—by getting the virus from the wound or destroying it there.

Since I was appointed to report on this subject, I have carefully gone over seventy-eight long columns in the Encyclopedia of 1797; the one hundred and one pages of the Transactions of the American Medical Association, embracing 106 cases of rabies reported by the Committee of that Association in 1856; the interesting account of it contained in *Erichsen's Science and Art of Surgery*; and last, the more recent and exhaustive history of the

disease given by Ziemssen in his *Cyclopedia of the Practice of Medicine*, where forty-two pages are given to the disease as it is manifested in dogs and other domestic animals, and forty pages as it is exhibited in human beings. As Ziemssen has embraced in his article all that was known up to his time, 1875, and in which he differs scarcely at all from all former writers, his declarations may be considered as reliable information as is attainable. To make copious extracts even from this voluminous report, which embraces all that is known on the subject, is unnecessary, and I shall briefly summarize it.

The cause of the disease in man is generally from the bite of a rabid dog, or the application of the saliva to an abraded surface or an incision through the skin. It *never* occurs spontaneously even in dogs.

The experiments of Herbing conclusively show that the saliva of a rabid dog is inactive when brought in contact with the healthy and unabraded mucous membrane of the mouth and alimentary canal. Pasteur and his disciples say exactly the same. In the time of Aristotle it was considered the most fearful of maladies and that by merely coming in contact with the body, or by treading upon the saliva of one affected by rabies, the disease might be contracted.

Even now there are districts in Europe, namely, the military frontier of Austria where the disease is frequent, in which the dread of it is so great, say historians, that human beings who suffer from it are shot



by their neighbors or not infrequently commit suicide. Even in my boyhood it was understood by us that if a person had hydrophobia he must either be bled to death, or smothered under feather beds. And only three or four years ago the newspapers reported a case of rabies, near to or in Atlanta, which could not be kept under the bed by four men, who were on it, but when they get two more on they succeeded in controlling him—whether by smothering or not, they did not state. How I suffered night and day when young Charles Rossith, one of my school-mates and a boy of my own age, was said to have hydrophobia and I supposed would be smothered under feather beds, I shall never forget. The young boys about the neighborhood gathered in groups agonized by what the poor lad was to undergo.

**SYMPTOMS IN DOGS.**—Ziemssen says that the symptoms described 200 years ago, were given as reddened eyes, drooping tail, projecting tongue and foaming mouth. These will do for the present time as well. But two or three pages are filled with an account of the many phenomena shown by different cases in the prodromic stage.

Two forms of rabies have long been recognized. The authors of long ago described them as the *Violent Form* and the *Sullen Form*. Pasteur's two forms he names: the *Furious form* and the *Paralytic form*.

The *Furious* in which there is delirium and disposition to bite. The *Paralytic* in which the animal is mute and paralyzed. In the *Furious* form the maniacal spells appear only spasmodically, while in the intervals, the spasms are present only to a slight degree. The *Furious* attacks may last several hours. *No special dread of water exists.* In very rare instances do animals suffer from spasms of the throat in attempts to drink water. A discharge of foam from the mouth is scarcely ever seen. Saliva is emitted only when there is inability to swallow. When death is near, the pulse is small and thread-like, the breathing labored and the pupils dilated. At times partial convulsions set in. Death on 5th or 6th day; rarely later than 7th or 8th; never prolonged beyond the 10th; invariably fatal.

The *Sullen* or mute form constitutes only about 15 or 20 per cent; it runs a shorter course; the victims are less active; are silent and depressed; not disposed to

leave home—which in the furious form the dog is disposed to do—or gnaw or bite. Paralysis of the lower jaw supervenes, with difficulty in swallowing, almost everything taken into the mouth falls out, and frothing appears. There is a changed voice, loss of appetite, constipation, rapid emaciation, paralysis of hind parts and fatal termination more quickly than in the furious form, namely, within two or three days.

In other domestic animals there are the same symptoms as in dogs. *In none of them is there dread of water.* They lap it eagerly so long as there is no difficulty in swallowing.

There are few authors who regard this affection as having been properly named hydrophobia, as persons suffering from it *have no dread of water.* Our eminent Pasteur says, emphatically, "*Dogs with rabies have no dread of water.*" This is true also in man, as has been shown in many cases.

**THE DISEASE IN MAN.**—In man the initiatory symptoms are said to be slight chills and heats, alternating; some pain or discomfort in the forehead; restlessness, and loss of appetite. "But one of the earliest and most persistent symptoms is an extreme degree of mental agitation and terror," says Ziemssen.

**INCUBATION.**—Ziemssen says "it varies extremely. In six per cent. of all cases, it varies between three and eighteen days. In sixty per cent., between eighteen and sixty-four days, while in thirty-four per cent. it exceeds sixty days." Haubner writes, "Eighty-three per cent. were within two months; sixteen per cent. within three months, and only one reached four months. The duration of the disease when fairly established is very short; rarely longer than from one to six days. In the 106 cases reported by the Committee of the American Medical Association, the great majority died within four days,—and this is the time given by most writers.

**SYMPTOMS.**—These are so various, if the actions of the patients are regarded, that nothing definite can be said. In some, the disease is manifested suddenly and is so evidently the result of fear and not actual disease, that the symptoms will be as varied as are the mental and nervous organizations of the patients. They are not as characteristic of the disease as are the symptoms which declare inflammations

of the brain, or the thoracic and abdominal organs. Respiration as a rule is, in quiet cases, normal during the intervals, but during the paroxysm, "it is gasping, irregular, quite rapid, and sometimes accompanied by decided dyspnœa," says Ziemssen. These convulsive respirations (by lookers-on called convulsions) are similar, I have recently been told, to those produced by the sudden entrance into a cold bath, or having cold water suddenly poured on the back of the neck, and are accompanied with spasms of the throat, and sometimes there is vomiting of a foaming, mucus, dark-colored substance resembling coffee grounds. It is useless, now, to give a long account of symptoms, as no writer claims that persons suffering with hydrophobia bark like dogs, or perform other acts which indicate that the dog's nature has been, by the virus, developed in or transmitted to man; and yet scarcely a single case occurs without it being asserted by those in attendance upon it, that the patient was fearfully affected with spasms on seeing water, and barked like a dog, and tried to bite those near to him. In Dr. Leedom's case, the young man who believed himself the victim of hydrophobia was actually going around on his hands and feet like a dog.

We are then rid of two of the symptoms: the barking and the dread of water; and if we could prevent the mental terror we would probably divest the disease of its most agonizing feature and be able to treat it as scientifically and successfully as we treat tetanus.

It is quite time that our profession with its present great enlightenment and immense resources should not stand idly, helplessly by the bed-side of the afflicted patient. We should investigate the case; discover if possible what vital organs are affected; where death has made his attack; and, then bring our weapons of defense and aggression to bear upon him and thus rescue our patient. I have no belief in the incurable character of this disease, if by any means we can rid the patient of his mental terror. I have a confident hope and an earnest belief that Pasteur or some other close observer and investigator of disease—possibly one of this audience—will find a remedy to successfully combat the disease even when at its very height.

CAN THE DISEASE BE PREVENTED?  
From the days of Aristotle to the present

time, while the disease seemed to be rather a mysterious one, it was generally regarded as an affection of the brain and spinal marrow. One of the observers of 200 years ago queried whether it is not *wholly* a nervous disease.

Celsus, in order to prevent the virus from acting on the nerves of the part, as well as to prevent absorption of the virus into the system, recommended, as I have already said, the application of cups over the wound. And Galen, in the second century after Christ, recommended excision and cauterization of it; and from that day to this, one or the other, or both, have in all cases where danger was feared, been resorted to by physicians with almost if not quite unvarying success. The celebrated English veterinary surgeon Youat, with an experience beyond that of any one of his time, used caustic on the wound without a single failure. It is many years since I read his book, but I distinctly recollect that it was always successful if done before the accession of the disease. He used only the nitrate of silver. In our own country physicians have depended on excision or caustic, or both; and, so far as I have heard, without one failure in the thousands of persons thus treated. I have incised some and cauterized others and given to them such assurance of their safety that the mind of the patient was set at rest, and the result was good in every case. Strong, truthful, and encouraging as is the above testimony coming down to us through twenty centuries, what do we now hear the eminent Pasteur say? In a pamphlet published and circulated by one of his pupils who is trying to establish a "Pasteur Institute" for the prevention of rabies in those bitten by rabid dogs, at Red-Wing, Minnesota, it is boldly asserted that "the experience of Pasteur and his aids, with a practice vastly greater than any one else with rabies, is that *the use of strong caustics and the red-hot iron, is of no benefit, but rather an injury.*"

How can we account for this rejection of preventive measures uniformly successful through thousands of years, by one who has been so great a benefactor to France? You will scarcely be willing to hear me say that it is simply because he has a preventive measure to introduce which will, if he can throw doubt on the value of the means referred to, bring him an immense revenue. I hope this is not



the cause and I earnestly hope a better, truer reason can be given for his change. But, when, in addition to this charge against the means of prevention long and successfully used, he boldly announces that the bite of even a healthy dog may cause rabies, and that it is only in a Pasteur Institute prevention can be assured, and that large fees come to him from those who at great expense flock to his institute, I feel that he places himself on a plane lower than that on which Stoy or Fry stand. Nothing could be more efficient to bring patients to him from every section of our vast country than this declaration that the bite of even a healthy dog may cause rabies, and that the means of prevention used by physicians are not useful but injurious. It is sincerely to be hoped that the Red-Wing Institute will never be established.

Having given the modes of prevention in use by the profession every where and with great success, yet as they have been denounced by M. Pasteur as more than useless, it is appropriate here to give an account of his means to protect persons who have been bitten by a rabid dog from an attack of rabies.

He says: "I found out that the virus rabiesque loses its intensity by transmission to other animals. With the rabbit it increases, with the monkey it decreases. I took the virus direct from the brain of a dog dead from hydrophobia. With this virus I inoculated a monkey. The monkey died. Then with this virus already weakened in intensity, I inoculated a second monkey. Then with the virus taken from the second monkey I inoculated a third monkey, and so on until I obtained a virus so weak as to be almost harmless. Then, with this almost harmless virus, I inoculated a rabbit, the virus being at once increased in intensity. Then with the virus from the first rabbit, I inoculated a second rabbit and there was another increase in the intensity of the virus. Then, with the virus of the second rabbit, I inoculated a third one, then a fourth, until the virus had regained its maximum intensity. Thus I had obtained virus of different degrees of power. I then took a dog and inoculated him, first with the weakest virus from the rabbit, then with the virus of the second rabbit, and finally with the virus of maximum intensity. After a few days more I inoculated the dog with virus

taken directly from the brain of a dog that had just died of acute madness. The dog on which I had experimented proved completely insusceptible to hydrophobia. The experiment was frequently repeated, always with the same successful results. But my discovery does not end here. I took two dogs and inoculated them with the virus from a dog that had just died of acute hydrophobia. I subjected the second dog to my treatment giving him the three rabbit inoculations, beginning with the weakest and ending with the strongest. This second dog was completely cured, or rather became completely insusceptible to hydrophobia. "*Whoever gets bitten by a mad dog has only to submit to my three little inoculations and he need not have the slightest fear of hydrophobia.*" (1884).

I have already given you the treatment used so long by Dr. Stoy, and without a failure according to the reports—also Dr. Henry Fry's cure or rather preventive treatment in hundreds of cases without a single failure, he says. So too, a Dr. Jos. Emery, of Chester county, was for a long time celebrated as having a preventive that, when properly used, never failed in protecting the person bitten. Of this, more in another place. It may be proper to speak here also of a means considered by the people of Ohio, during a time reaching beyond this century, to be always successful in preventing the disease.

In an article entitled, "Uses of the Madstone," I find that a person bitten applied the tongue to it, and the poison was supposed to be drawn from his system. Hundreds were reported saved. What, now, shall we believe in relation to these secret remedies and the madstone? The Stoy, Fry, and Emery preventives were all vegetable substances, and therefore might have had useful medicinal properties—even if they had not, then they prove that mad dogs—dogs with rabies—are exceedingly rare, and still more rarely are persons bitten by them, and that the numerous fatal cases now reported are cases of false hydrophobia, the result of mental anxiety and fear after being bitten.

No one of you hesitates for a moment in believing that the madstone has no saving power, and, yet, hundreds of people have resorted to it and are convinced of its value in the cases used. But no cases have been presented to show that the

exemptions from the disease were due to the means of prevention used.

I will name another remedy with some proofs that it has real value as a means of prevention according to the testimony of truthful, sensible men. It is the root of the Elecampane—this was Jos. Emery's cure—Stoy's was Chickweed—Fry's a mixture of plants. Some who affect to know say it was Elecampane.

Could every case of true and of false hydrophobia be divested of the mental terror consequent on what the patient had heard of the fearful agony attendant on the disease, as reported in the newspapers and narrated by those who have witnessed cases, or had heard of them in their youthful days, I doubt not that the disease would exhibit symptoms as distinctive and as characteristic as those of chorea or tetanus.

A few years ago Gen'l W. H. H. Davis, editor of the *Doylestown Democrat*, after reading my essay on hydrophobia, published copious extracts from it followed by these remarks: "When a child I witnessed the chasing and shooting of a mad-dog, and, afterwards, listened to tales of horror, told of persons who had been bitten and who had been smothered under feather beds and otherwise hastened to the end of life, that their sufferings should cease. That day of horror has never entirely passed from my memory. I hail with satisfaction anything that may save other children and even adults from unnecessary suffering. If in this age, when the achievements of mind over matter are more clearly understood and recognized, it should transpire that disorders of the nervous system can be treated and cured by the allaying of nervous fears, humanity will lose some of its most excruciating suffering."

Such were his utterances. That the members of this Society should take this subject under consideration must be apparent to us all. As physicians we know

that there is nothing in the actual diseased condition of any of the body organs—the mental conditions not being taken into account—which could produce the fearful agony, the horrible manifestation of suffering described as always being attendant on the malady. There is not a single case given to us by the newspapers, from the pen of an eye witness, but is reported as being accompanied by horrible agony and superhuman strength and an uncontrollable disposition to injure others, and yet post-mortem examinations have proved that there is no evidence of there having been disease which could have produced such suffering.

The fact that the patient afflicted with madness brings before himself the horrors which from childhood he has heard described as the invariable attendants upon it, impels him to perform the acts and exhibit the fury of which he has so often heard. Speculative theories must yield to facts. Every writer on this disease speaks of the rapid weakening of the body, day by day, until death ensues. And, yet, this poor sick person in nearly every case is restrained by cords, bound hand and foot, or held down by strong men, or partially, if not entirely, smothered under feather beds—as in the case reported two or three years ago, as occurring in or near Atlanta, where four men on the top of the bed couldn't keep the victim down, but when two more got on he was quieted—whether dead or alive was not stated.

Our profession confesses its inability to successfully cope with this disease. This should not be. We have left to the proprietors of secret remedies, and the owner of the madstone almost the entire care of those bitten by mad dogs.

It is a reflection on our noble profession that we have wholly neglected to investigate this malady and bring our remedies to bear upon it.



## HYDROPHOBIA.

## [SECOND PAPER.]

## CASES.

As I have already stated, the committee appointed to report on this disease by the American Medical Association presented 106 cases which I have carefully read. In nearly all of them the predominance of the excited nervous system masked all other functional derangements and caused the seeming suffering. There was scarcely a single case that differed from those which we know were spurious, false ones as proved by their being utterly cured by means acting on the nervous system. When I spoke to you on this subject some months ago, and doubted whether there had been a single well authenticated case in our county, or even in the State, during the last half century, I was told of two undoubted ones here: one in Norristown and the other only a few miles away. I have since investigated them.

The first case was that of JOHN EARN-EST. At the time he was bitten his hired-man, Miles Burns, was also bitten by the same dog. The following is the latter's account of it:

Mr. Sullivan, the hatter, had a beautiful, favorite hound which had been kindly treated; a pet too, in his family, being much in the house. One day the dog was absent, the next day he walked into Mr. Earnest's office, a mile below Norristown, and quietly laid himself down under the desk. He was such a kind, gentle animal, apparently without an owner, that Mr. Earnest concluded to take him along home—a mile away. So he coaxed him from under the desk and taking a rope in his hand attempted to put it around his neck. The dog was not used to being tied and when the stranger took hold of him, bit him on one of his fingers. Mr. Earnest then called on Burns and they succeeded in putting a rope around the neck of the frightened animal, but while doing it, Burns was also bitten. They then brought up the light wagon to take him away. As soon as he saw the wagon he sprang into it and lay down under the

seat. He had been accustomed to be carried in that way by his master. Earnest took him home, but in pulling him into the barn to tie him there, the dog again bit him pretty badly on the wrist. When next day Earnest came to oversee his "works," Burns saw that he had his arm bandaged, and as he had only been bitten on the fingers when at the office, Burns inquired why his arm was bandaged, and was told of the second bite on the wrist. The first night after the dog had been tied, he jumped out of a high window and as the rope was too short to allow his feet to touch the ground he was choked to death. On the second day after he was bitten, Earnest did not come to the works, as was his daily habit, and Burns heard no more of him for two or three days, when he heard he was dead. It was of course reported as a case of hydrophobia. How can we account for this rapid development of the disease and the premature death? The period of incubation, as already stated, is weeks, not a few days, and the most rapidly fatal cases never, or rarely, die in less than four to six days. Mr. Burns stated to me that Mr. Earnest, from the moment he was bitten, became very uneasy, fearing the dog was a mad one, and worried about it all the time. He did not know that he went to any "mad-dog" doctor, but Dr. Duncan, who attended him, doubted its being a true case. It was evidently a death from fear. Mr. Burns' family, after the death of Earnest, insisted on his going to Mr. Emery, of Phoenixville, of whom I have already spoken. He never felt afraid of being infected and nothing came of it.

CASE II.—Mr. Burgess, machinist in Norristown, said: "His own dog seemed well and was about the shop, when, suddenly, he jumped up and ran into the street where he behaved in a most unusual way for awhile, after which he darted back into the shop, and through it into the yard where he dashed around wildly and finally jumped down into a cellar window. A fellow workman stooped down,

caught him by the back of the neck and jerked him out, and while tying him was bitten. The wound bled freely. Mr. Burgess said to him, "This may be death to you, perhaps." He replied, "That is my business." Mr. B. of course thought the dog was rabid. As he had heard that dogs would eat castor oil, and thinking possibly that it might be pain which caused him to act so strangely, he put some oil in a saucer, and securing it to a handle about two feet long, held it to him. He at once dashed at it and lapped it up. In a few hours he was well purged and soon quite well and continued so. The bitten finger healed naturally, even without antiseptic dressings, and the bitten man suffered no further."

**ANOTHER CASE.**—His beautiful Spitz dog was much admired by a visitor, who put his hand on his head to pet him. The dog turned and bit him. A few days after this, the dog was sold, or given to another person whom he also bit, but they did not kill him, as is the common bad custom. The dog continued well as did the bitten persons. Now if they had killed the dog, what fearful anxiety they would have had, and if failing to go to a "mad-dog" doctor, they would doubtless soon have had false hydrophobia, believed by those who heard of it to be the real disease.

**JOHN HOWARD**, janitor of a church in Manayunk, was bitten on the wrist while standing at the church door, February 15, 1892. He did not take any notice of the wound for one and one-half hours. When the people were leaving the church, he then thought about it, and saw some blood on the wrist. Then he went to Dr. Custer, who dressed it—without naming hydrophobia—by applying nitrate of silver, then covered it with iodoform gauze. His pulse was then 90 to 96. Wound healed without further attention. October 28, almost eight months after the bite, he came again to Dr. Custer. He said he had slight chilliness, with spells of heat and aching and soreness in his body, but especially from the tips of the fingers of his right hand (the one bitten) up to the shoulder and back of the neck. There was no redness of the bitten part. He had not eaten that day before coming to Dr. Custer; seemed well; pulse 96. Next morning pulse was 110. The pains in hand, scapula and neck were worse; the pharynx was not red all over as in scarlet

fever, but there were small, red, isolated patches, and also an eruption on the sides of the tongue, which Dr. Custer had seen described as a symptom of hydrophobia. On this Dr. Custer laid much stress, as pointing to rabies. The patient had no aversion to water, but when it had gotten somewhat down the throat, he would throw his arms above his head and make a motion with the jaws, as a person does when first stepping into a cold bath. Sometimes when the throat was filled he would jump up a foot or more as if to get air, his head being thrown back and elevated. Thursday he was thirsty, but when he drank acted as before, as if gasping for air. At midnight of 26th was worse. Dr. Custer was sent for—he was wildly raving and his wife was afraid of him. Dr. Custer then gave him  $\frac{1}{2}$  grain sulph. morph., and before 8 o'clock in the morning,  $2\frac{1}{2}$  grains with 3j bromide of potassium. No effect in producing sleep or contracting pupils. Pulse 117. Passed no urine from the evening when he took the first half grain of morphia until the evening of the 27th, about 36 hours, when the catheter was used. Friday Dr. Todd was called, and he and Dr. Custer both thought it a case of hydrophobia. Dr. Custer felt sure that the patient himself so regarded it, although not a word had yet been said about it. They advised his removal to the hospital, but a vestryman counselled a visit to Dr. Fry. The policeman's account of the trip as given to me is, "that he and another officer took him in a wagon. He rode quietly, talked to them, did not seem to be any way wrong. They asked Dr. Fry if he could promise to cure him. He said (in the man's presence) 'if he had not had a spasm he could. 'They,' meaning the Fry's, 'had cured them, even after having had a spasm. He would give him the medicine.' He did so, got his ten dollars and they started for home." Now mark what happened. They had barely started when he got spasms again and had them all the way home. While they were away at Lansdale, I saw a notice of the case and next morning, at 8 o'clock, I took the train for Manayunk. I was too late to see him. The officers, after having been up with him all night till 4 o'clock, had started with him to Blockley Hospital, and had then returned. All the way to the Hospital he had the spasms, as they called them.



CLINICAL NOTES\*. — John Howard; white; aged 42 years; native of England; married; church sexton.

Admitted to hospital about 6 A. M. October 28, from Police Patrol No. 18, from Manayunk.

A friend who came with patient said he had been bitten by a dog on the 15th of February, 1893. The wound was on the dorsum of the right hand. The wound was *not apparent* on admission. It was said that ever since the bite he had been much worried about it himself, and that his friends had constantly worried him by talking of the dangers of hydrophobia occurring. Also that advertising quacks (?) had sent him much literature on the subject which had kept his mind constantly on the dangers of hydrophobia. It was said that he had been drinking "some," but not to be often drunk for the last two weeks.

On October 24th, 1893, four days before his admission it was said he had begun acting strangely, to "bark," to be more worried than ever, and be anxious to go to Lansdale and consult a quack (?). He grew rapidly worse within the next 24 hours, being entirely maniacal at times, and finally went to Lansdale on the 27th of the month, for treatment. On his return home he became very violent and had to be restrained.

On admission to hospital his temperature was 102.8°, pulse 144, without tension, respiration 30 but not particularly labored. The expression was drawn, anxious, all the movements of the face appearing to be done under great tension, by

\* Department of Charities and Correction. Bureau of Charities, Philadelphia Hospital, Philadelphia, Pa. Daniel F. Hughes, Chief Resident Physician.

PHILADELPHIA, Nov. 8, 1893.

My Dear Doctor Corson.—I am glad to be able to comply with any request of Dr. Corson's. I have been a firm and practical advocate of your scientific treatment of Lung and Puerperal fever ever since graduating in 1878. I was fortunate enough to have as teachers Dr. Gross, Sr. and Dr. E. Wallace, and they early had their commonsense views impressed on my mind.

The patient, John Howard, was admitted and died during my absence in Chicago. He was diagnosed as acute delirious mania by Dr. Roland G. Curtin, who was called in my absence. I having, when home, charge of all acute mental cases from the moment of their admission.

I enclose you copy of our records of the case.

Again expressing gratification at being able to comply with a request of one who I hold in such high esteem as yourself, I am,

My dear Sir,

Very truly,

D. E. HUGHES.

jerks as it were, and yet there were no convulsions; the eyes were staring intently at whatever attracted them, but were moving about constantly, pupils moderately dilated and not rapidly mobile. The patient was constantly expectorating small masses of tenacious spittle, doing it with effort and throwing it far from him. He said very little and what he said was incoherent and more in means than in distinct words.

There was no appearance of spasm or convulsion; the skin of the neck showed no unusual sensibility; the patient drank freely several swallows and then stopped, apparently from simple restlessness, before he had emptied the cup, and spat out some of the water. He grew more restless as the day advanced, having various hallucinations. He said he was afraid of "sulphur" coming from the screen around his bed; he could both see and smell it and was afraid it would choke him. He would jump up in bed in great fright when the nurse would go near him with towel to clean his face from saliva, saying that she wanted to choke him. He sank into a condition of exhaustive coma about 1 P. M., lying quietly, breathing labored, limbs absolutely limp, temperature 101.6°, pulse 128, respiration 24. He remained in this condition, not responding to stimulants until 5:30 P. M. when he died, having been the house about 12 hours.

The death was reported to the coroner, who sent for the body and posted it at the morgue, and at the inquest the coroner's physician stated that "the membranes and cortex of the brain were deeply congested and death due to Acute Mania."

TREATMENT.—Hyosine hydrobromate gr.  $\frac{1}{4}$  with morph. sulph. gr.  $\frac{1}{4}$  once hypodermically. As cyanosis came on and continued he had three hypodermic injections of strychnine, gr.  $\frac{1}{4}$  with digitalis gtt. xv. Also whiskey and ether by hypodermic method.

#### FALSE HYDROPHOBIA.

Testimony shows that, in the opinion of physicians who have well considered this subject, there is much reason to believe that false hydrophobia is a very common occurrence, while true hydrophobia in man is almost never met with.

I have already shown you that John Howard's case was evidently the result of long brooding over the fear of what might

result from the dog bite, and the added fear produced by the unintentional but positive confirmation of those fears by the friends and by the physicians. While the result of the case in the Hospital, as seen by the physician there during his last few hours, and the post-mortem examination proved that it was a false case, the result of fear—*mental terror*.

The Earnest case, so extensively noised abroad and so unanimously believed by those who never saw the case, from the testimony of Mr. Burns was without a shadow of doubt a false one. There was in that instance no premonitory stage. It was mental terror, so strong as to take from its victim all control of his nervous system. Poor fellow! There he was, his mind confronted with the fearful fate, in his belief the certain result of the dog bite. No sleep, no drink, no food aiding the mental terror to drag him to the grave. It is not strange that four days in such a condition should end his life. And yet we all know that it was not rabies.

And Burgess' case. How instructive! A dog evidently mad, as they believed, and yet cured by a dose of castor oil, and the man bitten by him when in this apparently rabid state never affected by it, though taking no preventives. So, too, his second case. The Spitz dog. Had he been killed every one would have believed him mad, and the person bitten through fear of consequences would, in the opinion of the people, have died mad.

The justly eminent Dr. Wm. A. Hammond, of New York, I have already told you gives many most interesting cases of false hydrophobia. And to the case given by Dr. Leedom, I may add a case in my own practice.

In 1856 I was called to a tall, gangling young man who was suffering, the messenger said, from "some kind of spells." Through a heavy rain I made my way to the house on the Schuylkill Hills. On inquiring below stairs about the case, I was told they were sitting around the store, when this youth, of about 18 years, wriggled himself out of his chair into the fireplace close at hand, and rustled about in some cold ashes left there. The mistress of the house was evidently fearing some great danger to the youth. On going up stairs I found him stretched out on a bed with four men, one to each arm and one to each leg, holding him at full

length. He opened his eyes to the utmost and stared at me but not a word would he reply to any question asked him. After feeling his pulse and observing his behavior for a few minutes—he was turning his head from side to side as far as he could get it and snapping his jaws together as if he was biting at those on the sides of the bed who were holding strongly to his outstretched arms—I retired and going to the mistress, the mother of two young men who were holding him, asked her what she thought ailed him.

"Oh, doctor, I don't know," she said. "What do you think is the matter with him."

"There is nothing the matter with him," I replied.

As if offended she said, "I don't like to hear you talk that way."

"Well," I said, "please listen to me. I will go with you to his bed-side and then without looking at him at all, will say to you, as though I regarded him as not knowing anything talked about, 'This is a very serious case, but bad as it is I think I can cure him. I want you to go downstairs and heat an iron to a red heat, and in the meantime I will give him a powder that, if it act well, will begin to make him better in five minutes, and in twenty minutes will cure him entirely; but if it should not, then we will strip him naked and draw that hot iron down over his backbone to the very end of it.'"

At once, her son who was holding an arm, cried out, "Why, doctor, won't it burn him?"

"Burn him? Yes, it will burn him to the very bone, but what of that? It will heal again, and nobody will see the scar there."

As the woman started to go down, she turned and asked, "What kind of an iron shall I heat, doctor?"

"Any kind. A plough cutter will do—the nose of a plough cutter will be the very thing."

He knew well what a formidable thing a red-hot plough cutter would be. She left to heat the iron and I dissolved a quarter of a grain of sulphate of morphia in a tablespoonful of water. When ready I said to him in a very imperative tone, "Open your mouth." Slowly he opened it and I poured it in. Then, sitting close to the bedside I took out my watch, and when five minutes had passed, I said, "He



has had it five minutes, and if it acts well he should feel a little better." And then looking him steadily in the face, said, "Are you any better?" He responded by a grunt in which I could not discern yes, but which showed plainly that he was understanding well what I asked. Still holding my watch so that he could see it, when the ten minutes had come I said, "Are you any better?" There was a very indistinct yes. The fifteen arrived and the response was a fair, audible, "Yes." I at once opened the door and called the mistress. "He is better; the medicine acts well, but keep the iron hot." Then turning to the son I said: "He will be well when the twenty minutes are here, I need stay no longer. It is almost dark, raining hard, and I must start for home at once. But William if it should not cure him perfectly, don't forget the hot iron. Draw it down his back from his neck to his tail." Away I went. I went so quickly, that he might not be restrained by my presence, and that my orders so imperatively given would convince him that he could not escape them.

The next day at ten o'clock I rang the bell, and the mistress opened the door. The moment she saw me she threw her hands above her head and said: "Well, doctor, this beats anything thing I ever did see. You had not been gone more than half an hour before he was down stairs dressed up and went to the barn to do his work."

I forgot to say that before giving him the medicine I said to the son, "Why do you hold him?"

"Why, doctor he would knock his brains, out if we were to let go of him.

"Well," I replied, "They are his own brains, let him knock them out. Let go of him."

They did so, and he began a furious attack on the head board with both fists, but he hurt his knuckles and exhausted himself, and it was after that I gave him the medicine.

But had he been bitten by a dog? They did not know, but they were all convinced that he had hydrophobia. They had had him but a short time and did not know what might have happened him previous to coming to them.

But we have other testimony. The recent deaths of Mrs. Hohman and Elmer Pickering, of Frankford, from alleged

hydrophobia resulting from the bite of the same dog, and the opinion of Coroner Ashbridge that no such disease exists, has awakened interest and led some prominent physicians to express themselves on the subject. Dr. Chas. M. Dulles, who has for years made a special study of it said: "Hydrophobia is not a distinct or specific disease. It has no symptoms peculiar to itself. It is really but a combination of the symptoms of many other diseases; and in all the cases I have examined, I have never seen any symptoms which did not belong to other and specific diseases—those of the brain, nervous system or throat. Those who believe in hydrophobia now, are those who believed in witch-craft in the old colonial days. Fear is a very large element of it. It occurs often and flourishes in those places in which it is believed in. See how it is in Paris. People thoroughly believe in it there and have a dread of it, and the result is a large number of cases constantly. What is true of Paris is true of France. The Rhine separates the French from the Germans but a short distance. The Germans do not believe in hydrophobia. They have very few cases in consequence, I believe, of their belief.

"There was a recent case of alleged hydrophobia in this city, in which an eminent specialist on nervous diseases, two regular practitioners and myself were concerned. It was a typical case of hydrophobia; there were all the symptoms popularly supposed to indicate the disease. We performed an autopsy. The person died purely and simply from meningitis located at the base of the brain and the spinal column. Another case with a regular practitioner and myself. It was as regular hydrophobia as I believe anything can be. The patient died. I predicted that lesion of the brain would be found. The autopsy revealed just the conditions I had prophesied, but remained (to others—the public) one of hydrophobia. Another thing. It is very common for the bite of a dog to be cauterized with silver and hypodermic injections of morphine to be resorted to in the later stages. There is no case on record in which these treatments have been used and the patient recovered."

Dr. Charles Mills, the eminent specialist in nervous diseases, said: "I believe that eight cases out of every ten of alleged hydrophobia are not genuine, and I am

not convinced that it is a specific and distinct disease. I have seen several cases and have been concerned in several more, and have participated in three autopsies. Of five cases in which there was every symptom that is coupled with hydrophobia, four were undoubtedly due to other diseases, and possibly the fifth was also. Meningitis and epilepsy enter very largely into the composition of hydrophobia. Imagination also plays a large part. There is a specific nervous disease known as hydrophobia. I now have as a patient, a woman who has long suffered from it. She has most intense horror of dogs, and it is a fact that, although in very good health otherwise, this woman actually remained inside of her house for eleven months, not daring to go out. She could not be induced to do so. A short time ago her husband happened to tell her that a dog had brushed against him as he was walking along a street. The wife's fears developed to such an extent that it was possible to calm her only by destroying the suit that her husband wore when the dog brushed against him as he walked. It seems odd, don't it? But it is perfectly true. The sight of a dog from one of her windows, if his tongue is hanging out, or if there is froth at his mouth, is apt to give her convulsions. Recently she heard that a dog had a fit on Thirteenth street. She at once begged all her family to avoid the locality, as much as possible. Now, if that woman should be bitten by a dog what do you suppose the result would be? How long do you suppose she would live? She would be likely to die of convulsions in 48 hours. I agree perfectly with Dr. Dulles that Pasteur's discoveries and his treatment have done more harm than good."

Of the thousands, yes tens of thousands

of persons who are loud in their belief and knowledge—as they call what they have heard about cases—not more than one in a hundred, if one in a thousand, has ever seen a case either of the true or of the spurious disease. So I feel like giving the belief of a coroner who has investigated many cases called hydrophobia, which proved fatal. In the case of Mrs. Hohman, of Frankford, already referred to, a post-mortem of whose body was refused by Coroner Ashbridge, he wrote as follows in defense of his act: "This I refused to do because, from my experience and standpoint, there is no such malady as hydrophobia." In human beings, I suppose he meant. "As it is classed to-day, and for the past year, I have made no post-mortem in such cases, because the results yield nothing, nor does it prove anything in the interest of science, or decide anything definite as to the cause of death. All that has ever been found in post-mortems in the past twelve years is a *congested state of the brain*, and this will be found in all cases of death from convulsions and the like. In the epileptic the symptoms are precisely like those of so-called hydrophobia: frothing at the mouth, rigid jaws and convulsions. I have observed the same things at post-mortems upon persons apparently in previous good health, who have died from nightmare, or horrors; the brain congested in a similar manner. To my mind it is the effect of the mind over the body, producing acute nervous strain and disorder; and as to the blood-poisoning theory, that will not stand investigation. The treatment of Pasteur has few believers. If one would see the symptoms of a person dying in an epileptic fit, and it was said he had been bitten by a dog, it would be at once pronounced the worst case of hydrophobia known."



## HYDROPHOBIA.

## [THIRD PAPER.]

## CASES.

CASE REPORTED BY DR. JOHN W. GREEN, OF NEW YORK.—When Dr. Green had heard his statement and that he had been bitten by a dog, he sent for his family physician. They met late at night and advised a course of treatment; but he would do nothing, and said, "There is no hope for me. I must die." The nervous disturbance increased; he could not sleep; was restless; asked them to stop him, so that he could not hurt anyone. At eleven o'clock next day he was attacked with a convulsion; four or five strong men seized him, threw him on the bed, face down, and from fear of injury kept him there till the spasmodic action ceased. When they loosed their hold he was dead.

Yet this case of mental terror was reported to the Committee of the American Medical Association as a case of hydrophobia.

CASE 24 OF THE REPORT.—Mr. Hopkins was punishing his own dog that showed no signs of ill health or madness, and was bitten by him. Two days later he untied the dog and he went away. This frightened Mr. Hopkins and he began to read about hydrophobia and talk

about it. His mind continued to be greatly occupied, but he was not attacked for nearly three months. He was then ordered Dover's Powders, 10 grains every hour; at 10 P. M. tincture of aconite was added. He died sixty-one hours from the attack.

How evident, that it was the result of brooding so long over the fear of hydrophobia.

DR. WINTHROP SARGENT'S CASE.—I have had one case, in 1849, at Manayunk. Drs. Thomas Betten, Conroy and two others saw it. Dr. Betten said he had some experience with the disease and pronounced it a perfectly sure case. The patient had been bitten some weeks prior by a slut that had a litter of pups, with which he was meddling, which aroused her anger and caused her to bite him. After the biting she was chased away with intent to kill her, but they did not succeed, and it was not until some time after the patient died that the slut returned perfectly well and was permitted to live.

How convincing is this case that mental terror led to feelings and acts which this man had heard were attendant on hydrophobia, and the nervous system gave way to his fears.

DR. W. L. ATLEE'S CASE, No. 11.—Mrs. Kelly, bitten November 3d, 1838. Dr. Penypacker saw her on the 5th. Ordered wound washed with salt and water, and a salt poultice applied. Was advised to try Stoy's cure. Went through a full course after which she was quite well, until about three weeks before Dr. Atlee was called (February 9th, 1839), from which time, until then, she had not been very well. It was a pain in the arm extending to the shoulder, for the last three days. She had blistered the arm after first using a liniment on it. But she had not got relief. Dr. Atlee had been sent for.

It was evident to Dr. Atlee that both herself and her husband feared the dog bite was the cause. Indeed; the husband so declared for himself. It was then 9:30 A. M. From this time the doctor's conduct must have been to her strong confirmation of her worst fears. She had sent for him because of rheumatism, as she averred, and he writes: "I found the symptoms as above described, with the pain more acute in the joints than elsewhere, taking in the character of the local symptoms of acute rheumatism. Her countenance was anxious and her manner a little hurried." I ought to say, that on this visit he did not know that the dog had bitten her. She only complained of rheumatism, and that he prescribed for. On leaving her he told her, "To send word for him in the morning, if she was not better, or sooner, if she became worse." The next morning he saw her at 9:30 o'clock. She had spent a bad night. Soon after going to bed felt as if suffocating, with pain at precordia, etc., and after that could not sleep. Every few minutes she would start up in great distress and sense of smothering. [This increase of distress was evidently due to the doctor's expressed wish to be sent for if she got worse.] It was at this visit, Saturday morning, that Dr. Atlee learned all about the dog bite and the Stoy remedy, so Dr. Atlee adds: "After giving me this history of herself, she said 'she did not believe the disease was from the dog bite,' but her manner disclosed that she secretly believed *that* to be the cause." Dr. Atlee had gone then at 9:30 A. M. and the long story of her case had been told him by her, her husband, too, being present. So it was doubtless 10 o'clock before he left.

At one o'clock he visited her again. He writes: "She received me tranquilly and expressed herself glad to see me. Her husband said 'he believed her illness came from the bite of the dog.' She said, 'No; it's rheumatism. I will soon be well of the spasms.'" At 3:30 P. M. he visited her, having his brother, Dr. John, with him. "The visit of my brother produced no unusual agitation. She seemed glad to see us and got up and offered us chairs requesting us to be seated. Called again at 8 P. M.; she was no better. On next day, the 11th, visits at 8 and 11 A. M. and at 3, 6 and 8 P. M., five visits in a day. During that day she was much engaged in prayer. Had Dr. Atlee to read parts of scripture to her, first the 52d chapter of Isaiah. Then she said, 'I am afraid of tiring you, but I would like to hear more.' Then I read eight or nine succeeding chapters, at the end of each chapter asking her if I should read more. She replied, 'You are too kind; but if you are not tired I should like you to read of the sufferings and death of our Saviour.' I then turned to Matthew and read for her. During all this time she remained perfectly tranquil and composed, although her spasms had been so violent before." Before I left she desired to know my opinion of her case. By suggestion of Dr. Atlee a clergyman was called; she talked freely with him. At this time there were four doctors. "The clergyman was engaged with her, in conversation and prayer, about half an hour. During the whole of this period she was remarkably calm and free from spasms, although her paroxysms before and immediately after were frequent and of the most violent character."—p. 277. "It would appear from this," says Dr. Atlee, "as if the exercise of the mind had some mysterious connection with the production of spasms. For as the paroxysms were entirely suspended while the mind was engaged in this all-absorbing question, and as they reoccurred as soon as the mind was not thus exercised, it would indicate almost as close a relation as cause and effect."

[The members of the profession will observe the correspondence between this circumstance of this case, and a distinguishing feature of chorea, viz: the act of volition being necessary to the convulsive movement. For *volition* substitute nervous system.—H. C.]



The case went on. Spasms, no food, no drink, much medicine, quiet rational spells. At no time was it needful to tie her or restrain her. No disposition to bite, no barking like a dog, though she was somewhat hoarse. She sat in a chair during the whole course of this disease fearing suffocation if she should lie on the bed. She died at 11.30 A. M. on the 13th. Four days after the attack began, about as it appears from the history of numerous cases, as life can be maintained (I suppose) under such a fierce strain of the nervous system. Spasms, no food, no water, no rest in bed and much medicine.

#### *Effect of a Dog's Bite.*

**AFTER SUFFERING INTENSELY FOR DAYS,  
A MAN DIES IN TERRIBLE AGONY.**

Lynn, Mass., June 8.—John Anderson, a Swede, three weeks ago was bitten on the hip by a dog. The wound was not cauterized and Anderson was taken ill on Monday, and at once had a decided antipathy to water.

Tuesday night he began frothing at the mouth and was unable to take food. The sight of strangers caused him great fright. About midnight he began barking and snarling like a dog and raved in delirium. In his struggles he bit at his friends and tore the bed clothing to ribbons with his teeth. He gnawed the footboard and posts of the bed, his teeth sinking into the hard wood. He died in the greatest agony. Consulting physicians pronounced death due to the effect of fright and its subsequent action on the heart.

#### *Death from a Dog Bite.*

**A YOUTH FALLS A VICTIM TO HYDROPHOBIA OR MENTAL FEAR.**

Four or five weeks ago Charles Hensey, a fourteen year old boy, who lived with his parents at No. 39 North 37th street, was bitten by a Dalmatian coach dog he was romping with. The dog had been taught a number of tricks, one of which was to jump from the ground and catch objects from the hand. The boy was engaged in this sport, when one of the dog's teeth accidentally pierced a finger of his left hand. The wound was cauterized by a physician, and, as it healed rapidly, the bite was forgotten until Monday last, when the lad began to complain of severe shooting pains in his left arm and shoulder. The boy

was employed by Mr. Taggart, a sewing machine agent at 3733 Market street, who, when young Hensey complained of the pains, sent him to Dr. Hopper for treatment. The relatives of the lad, however, objected to Dr. Hopper and sent him to an herb doctor at Bridgeport. This individual laid his hands on the boy and, giving him a cup of tea, said the perspiration that would ensue would drive the poison from the system. No perspiration followed the dose and the lad's relatives, being convinced that there was no poison in his system paid no further attention to his complaints until Wednesday, when he fell in violent convulsions. During the spasms which followed in rapid succession the sufferer foamed at the mouth and displayed all the usual symptoms of rabies. The convulsions were so violent on Wednesday that it required the united exertions of six men to keep him in bed. Towards evening he became quieter and at seven o'clock died. The boy is said to have been excessively nervous and sensitive and the attending physicians are of the opinion that he brought on the convulsions by brooding on the subject of hydrophobia.

#### *Died of Hydrophobia.*

Frederick Miller, thirty-four years of age and married, residing in the rear of 903 South 5th street, died at eleven o'clock Saturday night, at the Second District police station, of the most violent symptoms of hydrophobia. Strangely enough he was bitten four months ago by a small dog owned by Robert Clark, a lumber dealer, at Fifth street and Washington avenue. The dog had bitten several persons and its owner had consented to its slaughter. Miller, who volunteered to be its executioner, picked the cur up in his arms, but it squirmed and bit him severely on the lip. The dog was at once dispatched. Miller worried constantly and talked of nothing but hydrophobia, until he showed signs of being out of his mind. He became so violent on Saturday last that he had to be locked up in a station house cell for security.

#### *Hydrophobia Again.*

**A YOUNG MAN'S WRETCHED DEATH.**

Coroner Janney this morning held an inquest in the case of Frederick Miller, 18 years of age, who resided in the rear of No.

3517 Warren street. About three months ago the deceased was bitten by a small dog, which he had killed three days afterwards. Notwithstanding that he had the wound cauterized he was in constant fear of being effected by hydrophobia. About a week ago symptoms appeared which, although not strictly hydrophobia, were alarming enough to call a physician. Deceased complained of dryness in the throat, and evinced a repugnance for liquids. On Friday the deceased was affected with convulsions and on Saturday he underwent the horrible contortions. Once or twice he nearly succeeded in biting his mother, who was trying to calm him. In the latter part of Saturday afternoon his mother was compelled to have him taken to the Second District station house, where he died on Sunday morning. The attending physician testified that the deceased's death resulted more from fear of being affected with hydrophobia than from the actual presence of the disease, and that his death was caused by exhaustion; the result of acute mania, and the jury gave a verdict accordingly.

#### *Died of Hydrophobia.*

A CASE IN WHICH THE ACTUAL DISEASE WAS STUDIED TO ITS FATAL END.

Jersey City, N. J., December 5. One of the most interesting cases in the pathology of hydrophobia occurred here Saturday, and resulted in the death of Edward Coleman, of 269 Monmouth street this city, yesterday. The boy, a bright lad of six years, was bitten by a terrier belonging to a neighbor on October 22nd last. The dog bit Edward about the head and face in the most horrible manner. The boy was rescued and carried to a physician. Ten stitches were required for the wound in the face.

As it was not believed the dog was mad, the wounds were not cauterized. The reason for this was the terrier had suffered amputation of his tail, and it was thought the pain from the operation had made him vicious, so that when the boy called to him the animal was excited. The dog, it was afterward found, had bitten a cat and two chickens, all of them dying since from the effects. The dog was at once killed to prevent any further possible trouble.

The case was watched with close in-

terest. When the boy a few days ago began to show signs of nervous affection, his parents at once concluded to take him to the Pasteur Institute in New York city. When Edward was presented to Dr. Gibier, in charge of the Institute, an experiment was made by offering the boy some water to drink. A light spasm of the throat was apparent and on repeating the experiment the patient showed plainly the signs of hydrophobia. Dr. Gibier at once decided that there was no doubt of the case, and also that the virus had become so firmly seated in the system that inoculation would be of no avail. He advised, it is said, only a simple treatment to quiet the patient and fortify him as much as possible against the poison. The diagnosis proved correct, and the boy died at his home yesterday with all the symptoms of hydrophobia.

One of the interesting points of the case is that Edward had never heard of hydrophobia, and could not have apprehended the dreadful results. His imagination was therefore not affected and the case is purely an instance of the active force of the rabies virus.

#### *Hydrophobia Victims.*

A WELL DEVELOPED CASE—THE PATIENT BEGS TO BE KILLED.

Saginaw, Michigan, July 31. Morey Godfreg was attacked by a strange dog, July 4th. It knocked him down and bit him in several places. A few days ago he complained of feeling unwell and remained home from work. Yesterday he went into a spasm at the sight of water and has since that time gone from one convulsion to another; his frenzied exertions to get away from his attendants at times required the united strength of three or four men to hold him. He barks and snarls like a dog and tries to grab his attendants with his teeth, and between the spasms begs his attendants to kill him. The doctors say it is a well developed case of hydrophobia.

#### *A Boy Dies of Hydrophobia.*

Wichita, Kan., July 31.—Robert Tankersky, aged 12, died yesterday of hydrophobia. Those who witnessed his death described it as horrible. For several hours the boy was in convulsions, and it was as much as four men could do to hold him in



bed. He was bitten months ago, but the wounds soon healed. Three days ago hydrophobia symptoms began to develop. Fear of water was the first noticed. Wednesday morning the boy had his first convulsions, but they were not bad and did not last long. Yesterday morning he was again attacked, and for hours he howled, snarled, and barked, apparently in awful agony, until death relieved him.

#### *Afraid of Dogs in Heaven.*

A HYDROPHOBIA VICTIM'S ANXIOUS QUESTIONS BEFORE HIS DEATH.

Jersey City, Dec. 6.—Mrs. Catherine Coleman, whose six year old son Edward died of hydrophobia yesterday, says the boy was conscious until the last hour before he died. He asked his mother if there were any dogs in Heaven. If so, he did not want to go there; he did not like dogs. His mother said the boy did not suffer very much. He was always thirsty and hungry during his last illness. He was afflicted with severe convulsions of the throat, which made it very difficult for him to take food.

#### *Has the Hydrophobia.*

HARRY BRASSINGTON GIVES HIMSELF UP TO THE POLICE.

New York, June 25.—A man who said his name was Harry Brassington walked

into the police headquarters at Mt. Vernon on Tuesday afternoon last, and asked the captain in charge to tie him up "for God's sake," as he was suffering from hydrophobia, caused by a dog bite he had received several years ago. The sergeant thought at first he was fooling, until suddenly he became a raving maniac. He flew at policeman Myers and would have bitten him had the other four officers who were present not interfered.

Doctor Banning was summoned and morphine injections were given him, but without any effect. He became rational again in about an hour. An ambulance was summoned and he was conveyed to the hospital. He was taken again with a paroxysm when he arrived there. When it had passed he explained to the doctors that he had suffered from the same cause before and was perfectly conscious of the danger to those who attended to him.

He said that he had been treated by the Pasteur method in this city, and had thought himself cured until on his way home that afternoon he had felt the return of hydrophobia symptoms. At a late hour last night his death was momentarily expected. Brassington is the same man who, a few months ago, was found at Harlem Bridge, suffering from hydrophobia. He was taken to the Harlem Hospital and after being treated a few days was discharged.

## HYDROPHOBIA.

[FOURTH PAPER.]

## HAVE CASES OF HYDROPHOBIA BEEN CURED?

In the Encyclopedia already spoken of and published more than a century ago, the author gives many reputed cures and preventives, every one of which was highly lauded in its day, but only two cases were reported as cured after the paroxysms commenced, and they were cases which, judged by the account of them, might now properly be placed in the pseudo-hydrophobia list.

In 1753, a woman with hydrophobia in consequence of a bite from a dog supposed to be rabid, was blooded to about fifteen ounces on Saturday, and given a two-grain pill of opium every two hours. On Sunday the pill, with sulphate morphia added, having been continued, she was bled twenty ounces. On Monday her swallowing was better and the opium and morphia continued, and twelve ounces of blood taken. By a continuance of remedies she recovered. (Page 277.) This case brought opium into great repute, giving no credit to the blood letting. Both of those means were heroically used after that time for many years, but were finally proved to be of little value.

About the same time, 1753, Dessault, by a cure attributed to mercury, gave that remedy great repute. It was given internally and by rubbing mercurial ointment on the sore and on the arm of that side. It is much used and relied on, but time rolled on and the use of mercury was found to be as inefficient as the other vaunted means.

It is very interesting to read of the heroic efforts which were used with every new medicine or physical means that were spoken of as being efficient to cure. Cold baths are much relied on, and patients were carried to rivers and not only dipped in, but kept in for long times, and held under, sometimes until almost drowned. Arsenic too, was extensively used as well as every quack remedy that had any repute. But all failed to hold the confidence of the physicians and the public.

And so from that time until the present, the treatment has been in the hands of

non-professional people who have their vaunted remedies. The Fry's, Stoy's, Emery's and Vansciver's, and the mad-stone people have the confidence of the people, and physicians are ignored, as they deserve to be, in having confessed to an inability to cure a malady which they have never investigated as they should have done.

## IS THERE A PREVENTIVE OR CURE FOR THIS DISEASE?

The experience of two thousand years has proven beyond a doubt to every person who has studied the history of hydrophobia, that cleansing the wound thoroughly with caustic, or even incising it without caustic being afterwards applied, is a perfect preventive against rabies. No, not every person now. People who have institutes, like Pasteur in Paris, Gibier in New York, and C. N. Hewitt at Red Wing, to cure or rather prevent rabies in human beings, and who advertise the world over for persons to come to them, have seen that it is important to go back on their former, strong belief in the preventive means so long successful; so successful indeed that the great veterinary surgeon, Youatt, declared emphatically that the means spoken of, if done at any time previous to the actual development of the disease, would, if properly used, be successful in preventing further trouble. Yes, they not only declare these means not only useless, but oftentimes injurious. What motive inspires them? I need not say—a word to the wise is sufficient. Their acts speak as loud as their words. Despite their boasts Fry, Stoy, Emery and the mad-stone can all show greater success.

## ELECAMPANE AS A PREVENTIVE AND CURE.

Judge Richard Watson, after reading my pamphlet on hydrophobia, wrote to me as follows: "Are not many physical diseases brought about or greatly aggravated by mere mental fear or excitement? Your essay seems to point to this in hydrophobia. I remember hearing when a child that elecampane was a cure, or a preven-



tive of hydrophobia. My father had a favorite slut bitten by a rabid dog—he also bit some cattle that were said to have gone mad. The slut was kept chained for about a year and fed on elecampane and milk, then she was loosed and lived to die of old age. I thought it was an imprudent risk, but it showed their confidence in the medicine.”

THE “OLD CHESTER VALLEY CURE” \*

A lady met me this morning, saying “Did you see that receipt in yesterday’s paper for curing hydrophobia?” I had not seen it. “Well,” she continued, “it is just the cure I wanted you to write about two or three years ago—the Old Chester Valley Cure.”

I remember perfectly her anxiety that I should write to the public and proclaim that elecampane and fresh milk is the specific for hydrophobia, and my purpose is to repeat the account she gave me of it.

In her old home in Chester county, Pennsylvania, lived a German named Joseph Emery, who used to be sent for far and wide, when anyone had been bitten by a rabid animal. He went to see his patient carrying something understood to be a root, which he himself dug in the woods. He took a pint of fresh milk from the cow, put his root into it, boiled it, gave it to the patient fasting; made him fast after taking it: gave a second and third dose on alternate days and never failed in effecting a cure. In some way which she had forgotten, his secret transpired and the root was known to be elecampane. So well did he establish the local reputation of his specific, that, in his neighborhood, folks were not afraid of mad dogs.

The intelligence and integrity of my informant are beyond question, and I regret that her love of privacy should prevent her from giving the weight of her name to her conviction that this is an unfailing specific for hydrophobia. The people of Chester county are not a class likely to be misled by superstition, and she is confident that it was a general or universal belief that Joseph Emery never failed to cure or prevent hydrophobia. In one case the spasms had begun before the first dose was given, and the patient recovered. The medical properties of elecampane are very powerful. Milk it-

self is a specific for many poisons, and while the medical faculty know no cure for this terrible disease, we should open every avenue of light to the dark subject. If the disease is one of the imagination, we want a specific to give confidence and cure by the imagination; but this looks like a real cure of a veritable disease.—Jane Grey Swisshelm, in *Pittsbury Commercial*.

Robert Shoemaker, for a long time the experienced head of a wholesale drug house in Philadelphia, has been for about twenty years a strong believer in the protective power of elecampane as a preventive of rabies and has written much on the subject. I quote an article of his published in the *Philadelphia Ledger* years ago. “My attention was drawn to elecampane many years since as a preventive of hydrophobia. The active medical principle of the plant is found in the root and is called *inulin*. This I believe neutralizes the virus. Allow me to give a few instances, where this simple remedy has been used. My nephew, then a small boy, was badly bitten in the face by a dog unmistakably mad. The father of the lad came immediately to the city for advice. We called on an eminent physician, who at once prescribed the plant named. The root was given as hereinafter directed. No symptoms of hydrophobia appeared and the lad, now a hale, hearty farmer, lives to show the scar of the wound in his face.” The physician above referred to, related to me a number of instances in which the remedy had been used and *always with success*. He, in fact, remarked, ‘I never knew it to fail when properly administered.’ I will give you but two cases:

“*First*, Two men living near the city were bitten by the same dog, and within fifteen minutes of each other. The dog was secured and the next day showed unmistakable signs of madness and finally died of hydrophobia. Alarmed for their safety, both men came to the city next day and waited on the physician quoted above. He prescribed elecampane root. One of the men remarked, ‘that is an old woman’s remedy’ and refused to take it. The man returned home and put himself under the care of his own physician, who cauterized the wound and gave him medicine to salivate him. On the ninth day he was seized with spasms and died in

\* From *Our Dumb Animals*, Boston, July, 1874.

agony. The other man took the elecampane and never suffered in the least degree from the dreaded disease.

"Second, A number of cows in pasture were bitten by a mad dog. This coming to the knowledge of those who heard of the elecampane remedy, they thought it a good opportunity to give it a trial. The cows were accordingly separated. To one half the number, the root was administered (in form of decoction) and not one of the cows suffered from hydrophobia; whilst all of them not so treated took the disease and died from its effects, or were shot.

"In quite a number of cases coming under my observation of persons bitten by dogs supposed to be mad, I have recommended the use of the elecampane, and have yet to learn of the first case of hydrophobia resulting from such bite where the root was used. I have, therefore, good reason for confidence in the remedy. Whether after the disease manifests itself it would have a good effect, or any effect at all, I am unable to say. But the antidote is so simple and so readily obtained that it would be almost criminal not to employ it.

"Having said this much allow me to give the mode of using it. To one and one-half ounces of good, sound elecampane root, bruised in a mortar, add one pint of new milk, boil it to half a pint, strain off, and when cold take it at a dose, in the morning, fasting. No food should be taken for three to five hours afterwards. Repeat the dose on the third morning, allowing one morning to intervene, and again on the fifth morning. The above quantity is for an adult. For a child give a proportionate dose, say to one twelve years old, half the quantity."

The editor of the *Ledger* remarked on the above: "It is deemed proper here to express the strong belief that in a great many cases in which hydrophobia symptoms occur, the symptoms are induced by excited imagination and apprehension. Considering the large number of cases of injury from bites of dogs that occur every year and the small number of well authenticated cases reported as hydrophobia, persons who have the misfortune to get bitten may well afford to keep their minds at rest about the matter. Not less than a score of the carriers of the *Ledger* have been bitten by dogs, and some of them several times, but they, having no apprehensions

of hydrophobia, have never developed the symptoms of that disease. It is well, nevertheless to have the elecampane ready at hand."

Such is the statement—scores of times these carriers were bitten, but having no dread of a disease from the bite of healthy dogs, they paid no heed to their injuries and yet no harm came to them. But despite the fact that millions of such cases have occurred and no harm resulted, we are now told by Pasteur, Gibier and Hewitt and other pupils of the Pasteur Institute, that there is danger of rabies from the bite of even healthy dogs, and all who are bitten should come to the Institute; travel at great expense, hundreds of miles, many of them, and leave a good fee, besides, with the Institute. Such shameless frightening of the public should call down on the heads of the trio, the scorn and censure of all *honest, sensible* people.

More testimony in favor of elecampane as a remedy. My long-time friend Wm. H. Johnson, ex-Superintendent of the Bucks County Public Schools, thus writes me: "Many years ago when a school-boy, a case occurred in Buckingham township. Samuel Gilbert had seven cattle bitten by a rabid dog. It was near my home. Samuel had heard of the use of elecampane; got it; had the root boiled in milk, and to six of the cattle the dose was given by drenching them. In the seventh the animal was so refractory, that after making a thorough trial, the attempt was abandoned *solely* on account of the difficulty. This one took the disease and died. The other six were never affected by it. This and other similar circumstances coming to the knowledge of my mother, she procured and cultivated it. I am very familiar with it and have great confidence in it. I would, though, as a means of greater security previously use the surgical remedies in conjunction with it."

A physician, a graduate of the University of Pennsylvania, well known to me, who in conjunction with his practice has a large drug store, recently wrote to me as follows, "I have for 36 years been furnishing a mad-dog doctor with one of the ingredients used by him. It is a confection of opium. He administers it in 3 gr. doses; equal to 1-10, or 1-8 gr. of opium. He uses it with chick-weed and I know not what else. The small doses



of opium are to allay nervous excitement and to make the patient comfortable."

In addition to the mad-dog doctors named already, there was in the early part of the nineteenth century a Dr. Van Sciver living at Somerville, New Jersey, who had a far-famed reputation for curing hydrophobia.

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POST-MORTEM APPERANCES IN THE  
RABID DOG.

These are of a distinctly negative character. There is an absence of specific changes. The membranes of the brain are generally injected to a variable extent. The longitudinal sinus is filled with dark colored blood. Heart and pericardium generally normal. The most important changes are a dark condition of the blood,

some cedema of the brain and more or less catarrhal alterations of the mucous membrane, especially of the respiratory and digestive canals, and the striking emaciation of the whole animal. In cattle the morbid appearances are often similar to those of the cattle plague. In that disease, as we had it in this county a few years ago, they resembled those of pleuropneumonia. Now do those post-mortem appearances indicate that during life in man they could possibly produce the terrible sufferings spoken of as the invariably attendant on this disease? No! Far from it. Take away the mental anxiety; the disturbance of the nervous system induced by fear, and the suffering, judged of by the effect of such lesions in other diseases, would be that consequent on them in other cases.





